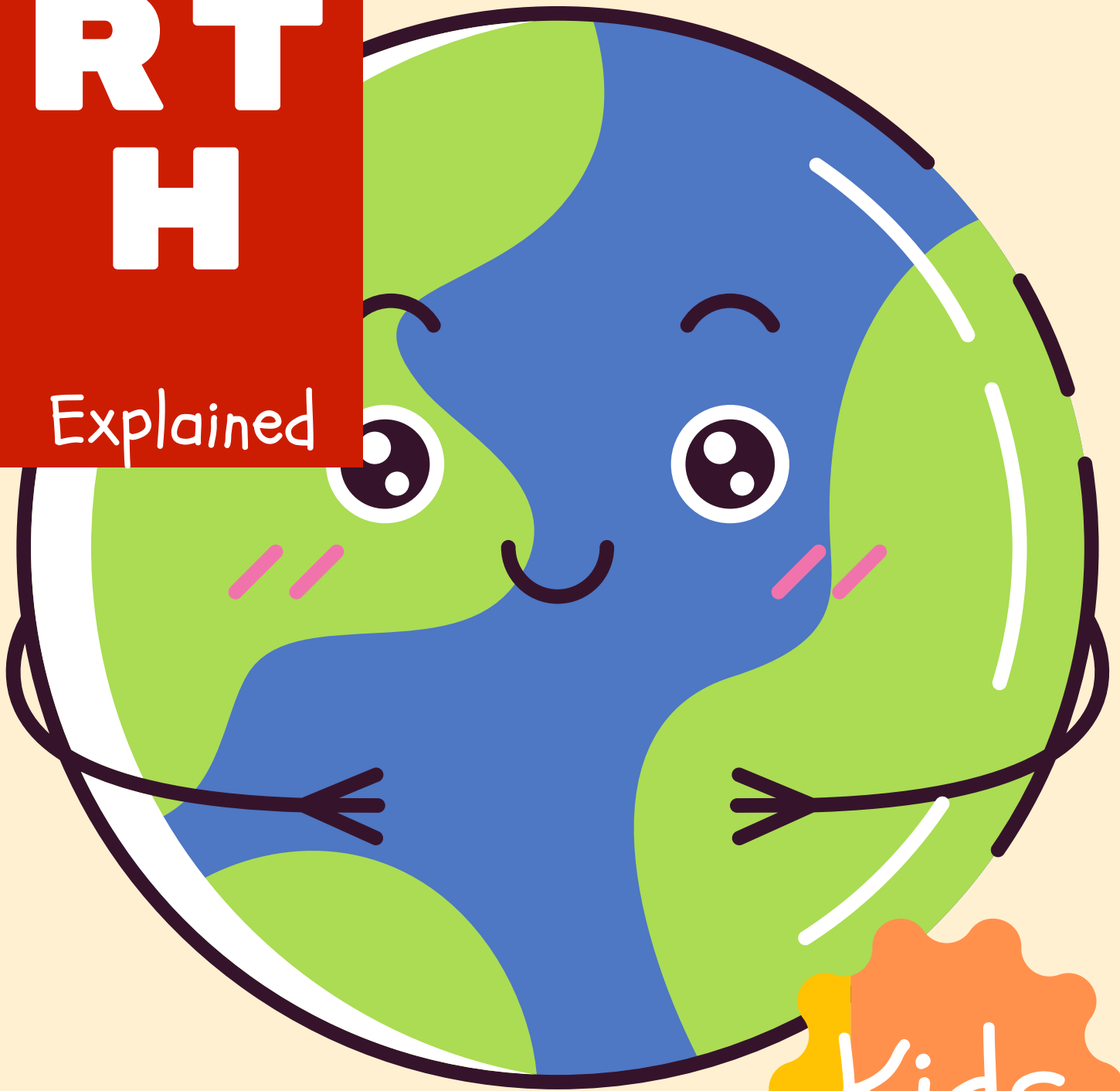


EARTH

Explained

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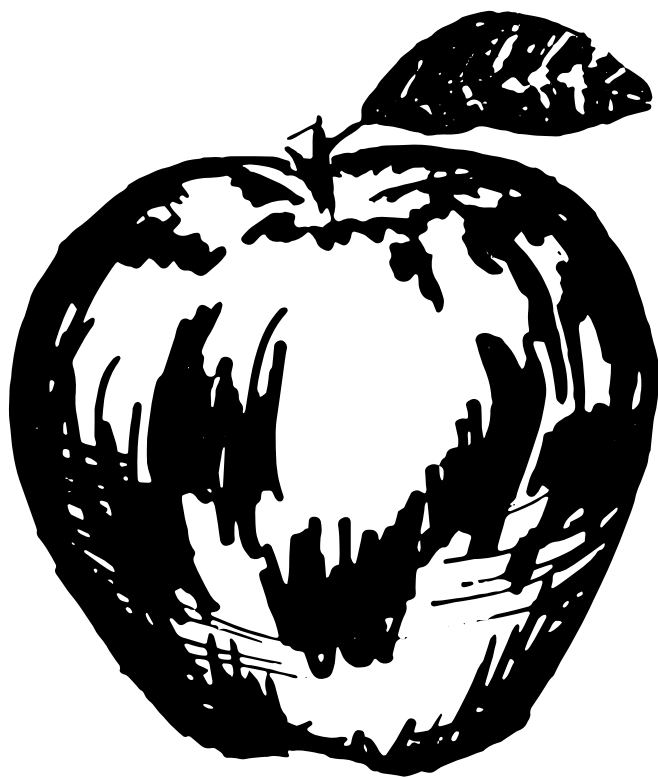


OUR BLUE AND GREEN PLANET

Kids

School note

Welcome students and parents to Tema Ridge School's *Explained* magazine. *Earth Explained*: our blue and green planet is our first magazine. We started this educational magazine as part of our wider reading and literacy initiative. All *Explained* magazines will be produced once a year so be on the lookout!



All our *Explained* magazines are geared towards primary school and junior high school. Each primary school and junior high school magazine contains activities and interesting facts kids can learn. Help save Earth by reading the online version on our digital library, Odilo.

Disclaimer: This magazine is solely for educational purposes. The contents of this magazine, name and design displays were put together by Tema Ridge School and should not be plagiarized or altered in any way. All sources of information are cited where necessary, and all illustrations are licensed and/or free. We reserve the right to change or add any materials or sources of information. Photos or audio recordings used in the making of this school magazine do not belong to us unless cited.

Thank you

Tema Ridge School

COMMUNITY 21, TEMA, GHANA

www.temaridge.com



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WELCOME TO EARTH



1. Earth is the third planet in our solar system.

2. The name Earth means ground or soil. It comes from a mix of English and German words.

3. Earth is life! Without Earth, animals, plants, and humans will not survive.

4. Every year Earth completes a journey around the sun.

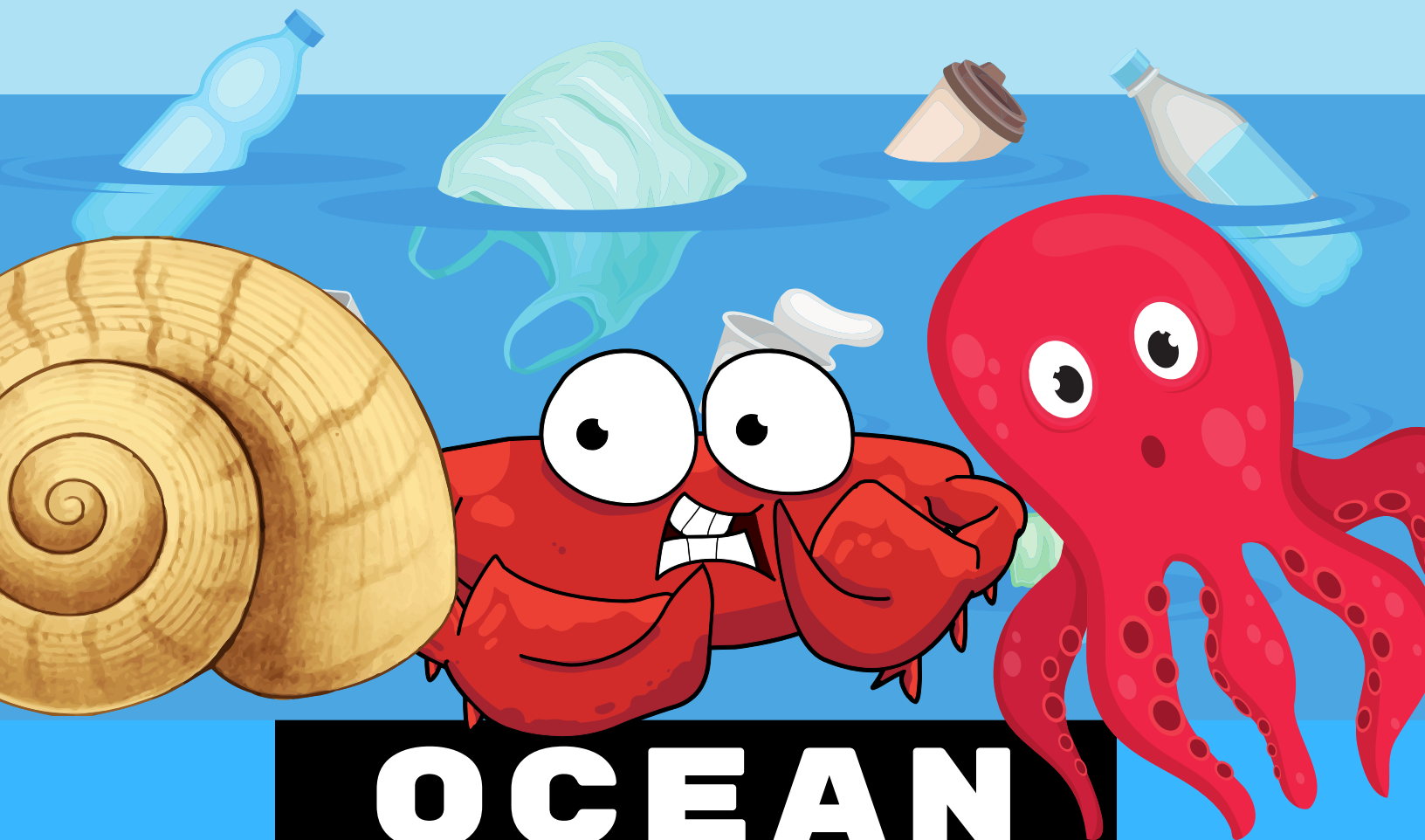
5. Oceans hold about 97 per cent of Earth's water.



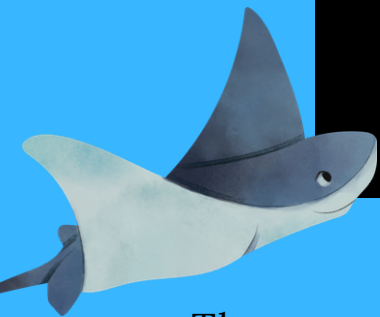
Did you know?
Earth has five regional oceans

Pacific, Atlantic, Arctic, Southern and Indian

Can you name Ghana's regional ocean?



OCEAN BLUES



The ocean is full of so many interesting animals and plants. All sea creatures depend on the ocean to survive. We also need the ocean to live, breathe and eat. Without the ocean, we and all sea creatures would have a hard time living on Earth.

Despite the many benefits the ocean has, it is constantly polluted with plastics and contaminants from landfills, oil rigs, and chemicals from factories. These harmful materials not only destroy ocean habitats but can also end up in our bellies when we eat contaminated seafood.



PLASTICS EVERYWHERE

WELCOME TO OUR MAN-MADE WASTELANDS

Plastics are man-made materials from oil or natural gas. This makes it almost impossible for them to break down in nature. Plastics were invented over 100 years ago. They were first introduced to the world during World War II when many other materials were scarce. Since the invention and first use of plastic, our industries have become plastic dependent. Why? because plastics are generally cheap and can be moulded into any shape. Water tanks, plastic buckets, plastic cups, fanyogo sachets, and even some medical supplies, such as syringes, would probably not have been possible if not for plastics.

However, we have reached a point where Earth, animals, and communities are choking on millions of improperly disposed plastic waste. In Ghana, about 2 per cent of the tons of plastics we produce is recycled. We can find the rest of the 98 per cent in open drains, streets, oceans, and rivers. So why is it so hard to recycle in Ghana? The short answer is we produce more plastic waste than we can properly manage and dispose of. During heavy rains, many areas in Ghana are flooded because our drains are filled with plastic instead of water. Floating plastics in open drains are swept away into our oceans and rivers.

The good news is that we are doing something about plastics in our environment! Many people have come up with creative ideas to slowly reduce plastic waste over time. The well-known Fan Milk plastic bags are examples of ways recycled plastics in our environment can be reused (check out R is for Recycle on page 18). In some communities, waste companies and organizations educate students about the importance of recycling.

What innovative ideas can you come up with to help deal with plastic waste in our environment? Use the creative lab section on page 20 to share your ideas with us!



Photo credit: Ghana News Agency



Photo credit: Pulse Ghana



THE GREAT GARBAGE PATCH

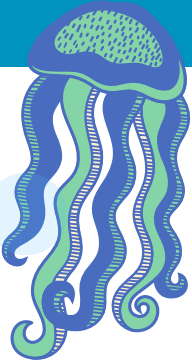
Circle what doesn't belong in the ocean.



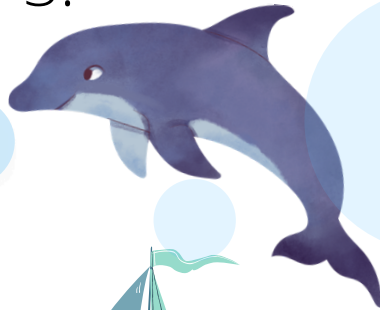
Ocean Puzzle

Can you solve the crossword puzzle using the pictures below?

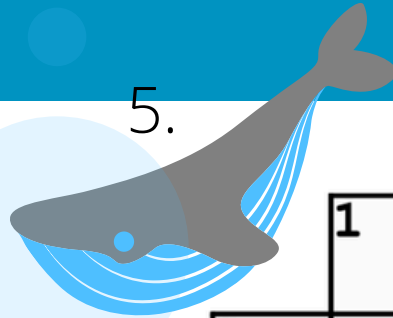
1.



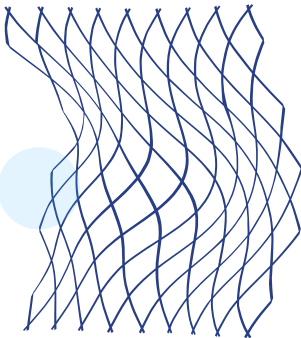
3.



5.



2.



4.



3

5

7

4

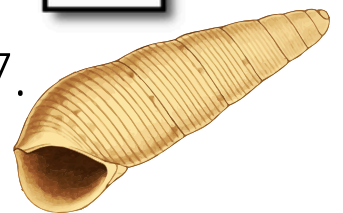
6

8

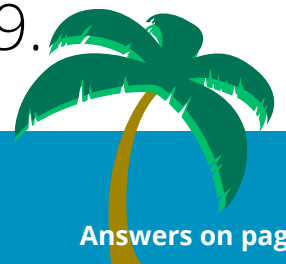
8.



7.



9.



6



9

AMAZON RIVER

Earth's mightiest river

The Amazon River is one of the largest rivers in the world. Located in South America, the Amazon River flows through Brazil, Peru, Colombia, Ecuador, Guyana, Suriname, Bolivia and Venezuela. That's a total of 8 countries! The river's journey starts from the glacial plateaus of the Andes Mountains in Peru and empties into the Atlantic Ocean. Along the way, the river passes through the Amazon Rainforest, the largest rainforest on Earth, and is joined by some other thousand tributaries made up of smaller rivers and streams. The drainage of the river and its tributaries into the Atlantic creates what is known as the Amazon Basin.

Where there is water, there is life! The river is filled with every creature and plant imaginable and unimaginable. From river dolphins to the flesh-eating red-bellied piranhas, electric-eels to bull-sharks, the Amazon River has got it all. During the rainy season, the river banks are covered with lush evergreen forests, plants, birds and other animals. Perhaps the most mind-blowing aspect of the river is that it is home to over 3,000 fish species and counting! The many creatures that inhabit the river and its surrounding territories attract tourists, biologists and even some athletes from all over the world. For example, in 2007, a man took home his fourth Guinness World Record after he swam the entire length of the river. In his attempt to cross the Amazon River, he swam 10 hours a day for 66 days. That's two months of swimming! The Amazon River is truly Earth's mightiest river.



VOLTA RIVER

Not your average river

Over 3,808 miles away from the Amazon River, the Volta River meanders on the plains of Ghana before flowing into the Gulf of Guinea. The Volta's journey begins when three rivers (the Black Volta, Red Volta, and White Volta) meet up north in Burkina Faso. As the river flows southwest into Ghana, it forms patterns along its path. Like many rivers all over the world, the Volta River helps many fishing and farming communities. In Ghana, farmers and fishermen rely on the river throughout the year for food and water for their crops. We also enjoy the many freshwater fish the Volta River offers.

Do you know the other inventive feature of this river? Think about all the things at home that use electricity. Phones, lamps, and radios are some examples. Can you name a few more? Thanks to the Volta River, our dams produce electricity using energy from flowing water. So, the next time you turn on the lights, remember where your power comes from!

This dam is famous for generating Ghana's electricity.

Answer on page
23

Volta is a Portuguese word and means *twist* or *turn*.

The river was named by early Portuguese gold traders in Ghana.

Every September 27th millions of people celebrate World Rivers Day.

Can you name the five
longest rivers in Ghana ?

1.

2.

3.

4.

5.

Answers on page 23



Did you know?

Ants help ecosystems when scattered seeds from scavenging grow into new plants.

Be careful not to step on me outside!



Photo credit: ©Canva

Vocabulary

Ecosystem: A community of plants and animals living together in an environment.

Scavenge: To hunt or search for food. Animals are known to scavenge for food in the wild.



Photo credit: © Canva

TINY HEROES

Most of us don't pay any attention to ants even though we find them all around us. We usually think of ants as tiny insects that invade our homes for food. However, ants are so much more than the tiny insects we make them out to be. They are essential workers in their communities and to ecosystems.

There are about 10,000 known species of ants around the world. Most species can be found in tropical regions. Ants are omnivores with powerful jaws. They can lift 20 times their body weight and have been known to prey on larger animals.

When ants release chemicals from their bodies, they communicate with each other about potential dangers in their surroundings.

An ant colony is ruled by a queen or queens. The workers build the colony and provide food; while the soldiers protect the queen(s) and colony from attacks.

In the wild, ants play an important ecological role in the environment. First, ants turn soil, allowing water and oxygen to reach roots. Second, ants provide food for other animals.

T R E E S

around us

Coconut milk is made from the grated pulp of ripe coconuts.



Chocolates are made from the beans of the cocoa fruit.



Shea butter is made from the fat of shea nuts.

About 10 litres of water is needed to make just one A4 sheet. That is equal to twenty 500ml Voltic water bottles!

eLearning reduces our use of paper and helps protect the environment.



Photo credit: ©Canva



Photo credit: Shweta Sengar (2018) India times

TREE HUGGERS

WHO ARE THEY?

Have you heard of tree huggers? Chances are you haven't. Truthfully, most people haven't either. A tree hugger is a person who advocates for the protection and conservation of woodlands or forests. They can be environmentalists or ordinary people who are genuinely concerned with the wellbeing of the environment. Unfortunately, there are also people out there who use the term 'tree hugger' to belittle the work of conservationists and environmentalists.

The first known tree huggers were from India two hundred and ninety years ago. The king of Jodhpur wanted to use the wood from trees in his village to build a palace; however, the villagers did not allow him to cut down the trees. To prevent the trees from being chopped, the villagers clung to the trees. This form of love and respect for the environment inspired so many people and movements around the world. Today, the selfless act of the villagers has changed the way we view the environment around us. Tree huggers all around the world continue to fight for the protection of forests through protests and activism.

Vocabulary

Activism: Bringing about changes in society through action.

Advocate: A person who supports a cause.

Belittle: To offend or make someone feel unimportant.

Conservation: Protecting nature from extinction.

Protest: When people come together to show they are against an idea.

Facts

Earth's surface is covered with 4 billion hectares of forests.

Ghana's forests are evergreen. They stay green and never lose their leaves throughout the seasons.

Leaves, seeds, roots, tree barks, flowers and plants are used in medicine to cure some illnesses.

Source: Shweta Sengar (2018) India times

Escape the forest

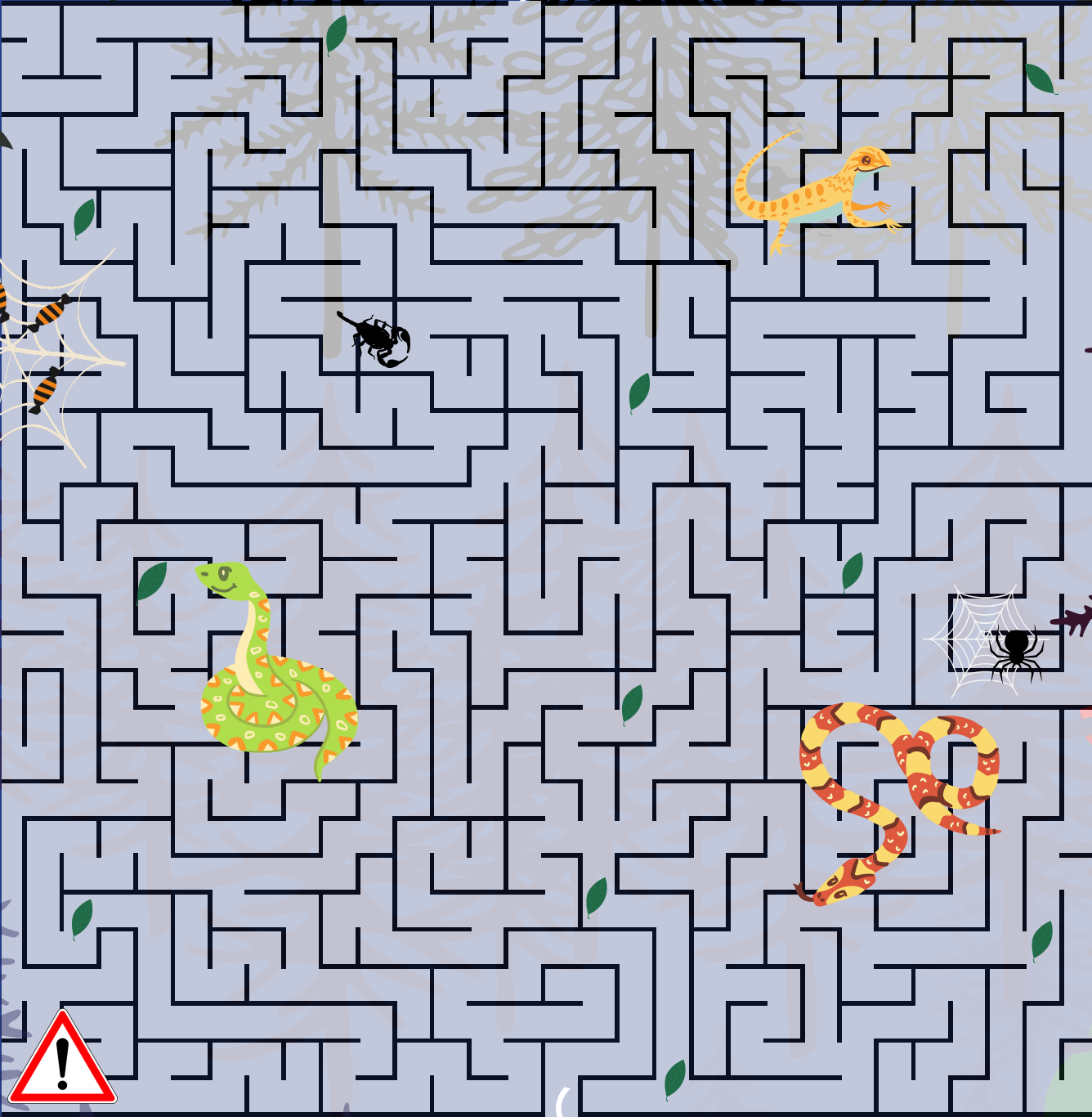


20 mins

Time
yourself

To create the ultimate life-saving pill, collect the five leaves along the right path in time. Beware of the many dangers lurking in the dark.

Begin here



End here

Total leaves

Answer on page 23

R IS FOR RECYCLE

Recycling
saves Earth

Reduce plastics in the environment by only buying what you need.

Reuse plastic cups, spoons and forks by washing them after use instead of throwing them away!

Hint

Baskets and cloth bags are great for shopping because they're environmentally friendly.



Recycle when you can. Always look out for the universal recycle logo on garbage bins, food packages, and drinks.

You will need

One empty box
A4 Paper
Markers, coloured pencils, or paint and brushes
Tape or glue

ACTIVITY

Create your own recycling box

1. Find an empty box.
2. Using a marker, coloured pencil, or paint, draw the recycle logo on A4 paper.
3. Tape or glue your finished logo on the box.
4. Gather empty plastic bottles you find at home. Take the caps off and put the bottles in your recycle box. Place the caps separately in the box.
5. Ask a parent to help you take out your box of bottle recycles the next time your garbage truck arrives. Remember to bring your box in for the next cycle.





Get the inside scoop

Dr Wangari Maathai was an activist and environmentalist from Kenya. She later on became the first African woman to receive the Nobel Peace Prize.

Wangari lived with her mother in the lush green lands of rural Kenya. Her home was surrounded by streams and the ground was fertile for planting. At home, Wangari's mother would tell her about the importance of trees. In particular, the sacredness of fig trees and warned her never to cut them down.

One day, Wangari's mother decided to send Wangari to school. Wangari studied hard and became an excellent student.

At university, Wangari excelled academically. She graduated from university with three different degrees. Her third degree was a doctorate degree in animal science. A doctorate is the highest university degree a person can receive if they study hard and are determined to succeed.

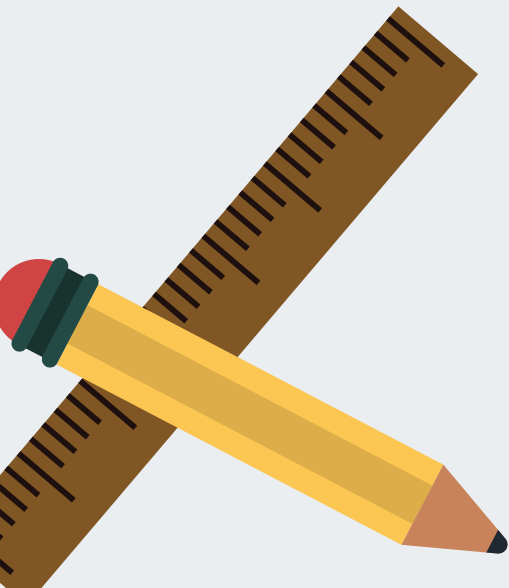
When Dr Wangari returned home after she graduated, she saw that the forests in her village had almost disappeared and the ground was barren. Everything looked dry and gloomy. Determined, Dr Wangari and the women of the village thought of a solution to the problem. Soon, they came up with one. Plant more and more trees to save the village and Kenya's ecosystems.

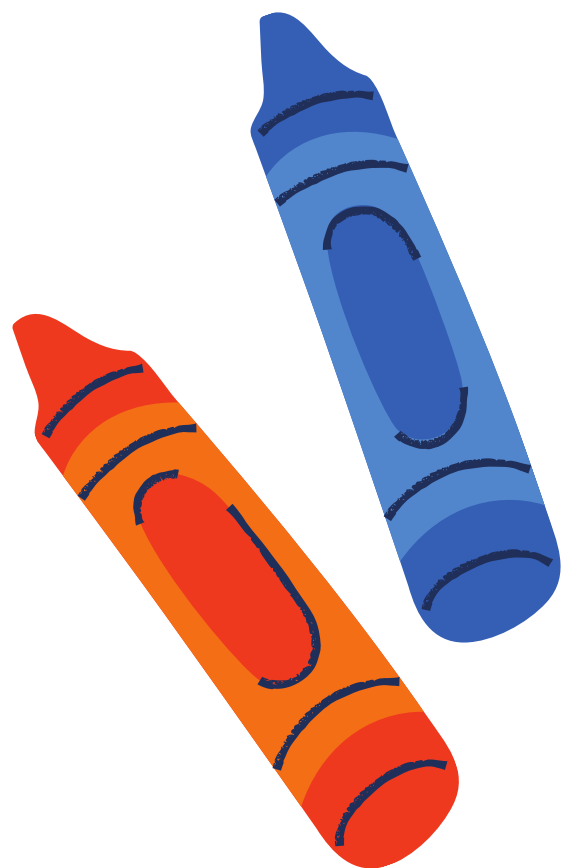
To learn more about Dr Wangari Maathai, grab any of the books above at your local bookshop. You can also read on Amazon Kindle or find a copy in Tema Ridge School's library.



Bring your ideas to life!

Tell us some creative ways you can help protect the environment.



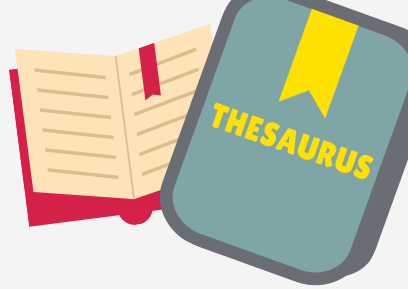


Food for thought

Looking up new words
and writing down what
they mean enhances
your reading experience
and vocabulary.

NOTES

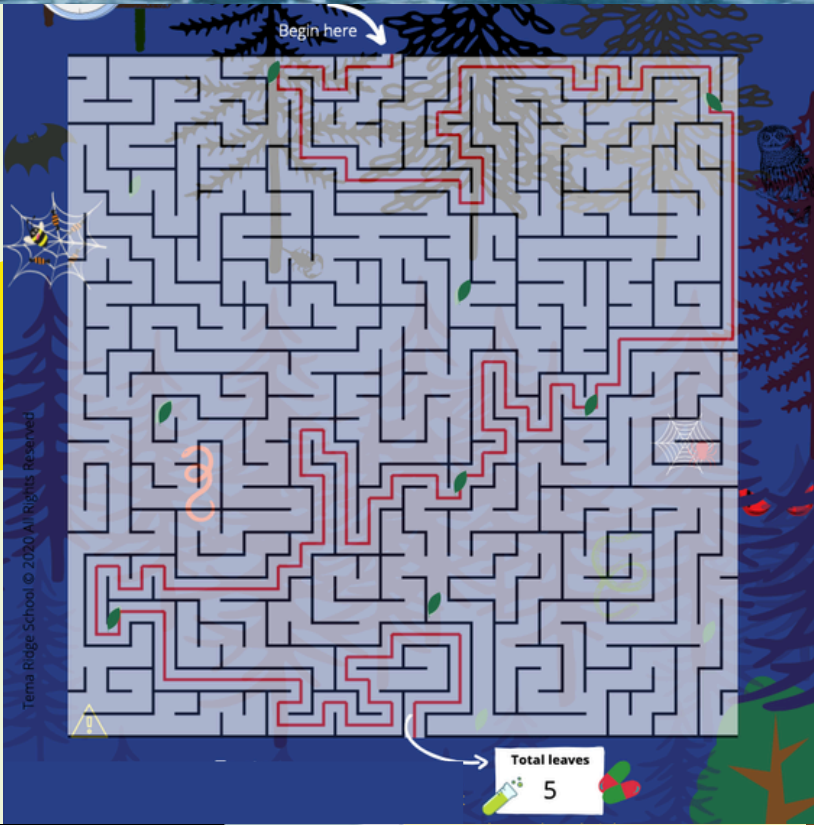
New words I came across



PUZZLE ANSWERS

Can you name Ghana's regional ocean?

Atlantic

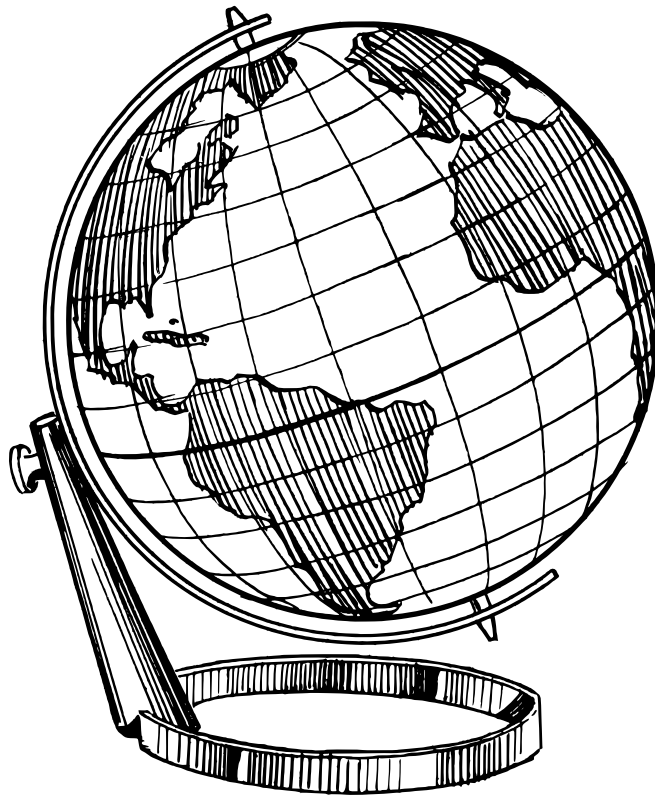


- 
- The map displays the geographical context of the Volta River basin in West Africa. The Volta River basin is highlighted in light blue, with its three main tributaries labeled: 1. Volta River, 2. Black Volta River, and 3. White Volta River. Other major rivers in the region are labeled: 4. Oti River and 5. Tano River. The map also shows the borders of several countries, including Ghana, Nigeria, and Mali.

Let us know how we did! Click the monkey icon and take the online survey.



OUR BLUE AND GREEN PLANET



Made with [Canva](#)



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